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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/933,279	08/20/2001	Lie-zhong Gong	1941. PKG	4642

7590 12/12/2003  
Cynthia L. Foulke  
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EXAMINER

GOFF II, JOHN L

ART UNIT PAPER NUMBER

1733

DATE MAILED: 12/12/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/933,279

Applicant(s)

GONG ET AL.

Examiner

John L. Goff

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11-14 and 20-39 is/are pending in the application.
- 4a) Of the above claim(s) 23,25-28,33 and 35-38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-14,20-22,24,29-32,34 and 39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 12.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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### DETAILED ACTION

1. This action is in response to Amendment A filed on 9/30/03. The previous claim objections have been overcome. In view of applicant's amendment the previous rejections using Hellmann et al. (U.S. Patent 4,906,497) are withdrawn.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### *Election/Restrictions*

3. Applicant's election without traverse of Group II, claims 11-14, in Paper No. 11 is acknowledged.
4. This application contains claims directed to the following patentably distinct species of the claimed invention:

**Species I** (appears to read on claims 22, 24, 32, and 34): directed to the energy-absorbent ingredient dissolved in the adhesive composition.

**Species II** (appears to read on claims 23, 25-28, 33, and 35-38): directed to the energy-absorbent ingredient dispersed in the adhesive composition.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claims 11-14, 20, 21, 29-31, and 39 are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable

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thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

5. During a telephone conversation with Cynthia Foulke on 12/2/03 a provisional election was made with traverse to prosecute the invention of Species I, claims 22, 24, 32, and 34.

Affirmation of this election must be made by applicant in replying to this Office action. Claims 23, 25-28, 33, and 35-38 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Claim Rejections - 35 USC § 102***

7. Claims 11, 20-22, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Jones et al. (WO 00/20157).

Jones et al. disclose a method for bonding together two substrates using a polymeric insert (i.e. melt plastic/adhesive) wherein the insert has organic dyes such as cyanine dissolved therein. Jones et al. teach the method comprises applying the insert to a substrate, contacting the insert with a second substrate, activating the insert using radiant energy (e.g. infrared) to melt the insert and contacting areas of each substrate, and then allowing the activated insert and contacting areas of each substrate to solidify thereby bonding the substrates together. Jones et al. teach the organic dyes absorb radiant energy having a wavelength greater than 780 nm, and Jones et al. teach activating the insert either before or after contacting with the two substrates (Figure 2 and Page 2, lines 27-33 and Page 3, lines 29-31 and Page 8, lines 20-29 and Page 9, lines 8-14 and Page 11, lines 14-18).

***Claim Rejections - 35 USC § 102/103***

8. Claims 11, 20, 21, and 29 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Shaw et al. (U.S. Patent 5,498,304).

Shaw et al. disclose a method of bonding together paperboard using a polymeric melt adhesive activated by exposure to radiant energy having a wavelength of 1000-2100 nm. Shaw et al. teach the method comprises applying the adhesive to a paperboard substrate, contacting the adhesive with a second paperboard substrate, activating the adhesive using radiant energy (e.g. infrared), and then allowing the activated adhesive to solidify thereby bonding the paperboard

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substrates together (Figure 2 and Column 1, lines 47-54 and Column 4, lines 8-12 and 41-49 and claim 1). Shaw et al. do not specifically disclose activating the adhesive prior to contacting with a second substrate (as opposed to activating before contacting). However, claim 11 requires a method "comprising" a number of steps such that it appears activating prior to contacting is not expressly required. In any event, it would have been well within the purview of one of ordinary skill in the art at the time the invention was made to expose the adhesive taught by Shaw et al. to radiant energy either before or after contacting the adhesive with the second paperboard substrate as both methods would achieve the same result, i.e. the adhesive bonding of two paperboard substrates.

***Claim Rejections - 35 USC § 103***

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al.

Jones et al. as described above teach all of the limitations in claims 13 and 14 except for expressly reciting the amount of time for maintaining the contacting pressure and radiant energy.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to experimentally determine/optimize the amount of time for maintaining the contacting pressure and radiant energy as a function of the type of polymeric adhesive, the intensity of the radiant energy, the bond strength, etc. as doing so would have required nothing more than ordinary skill and routine experimentation.

11. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shaw et al.

Shaw et al. as described above teach all of the limitations in claims 13 and 14 except for expressly reciting the amount of time for maintaining the contacting pressure and radiant energy. It would have been obvious to one of ordinary skill in the art at the time the invention was made to experimentally determine/optimize the amount of time for maintaining the contacting pressure and radiant energy as a function of the type of polymeric adhesive, the intensity of the radiant energy, the bond strength, etc. as doing so would have required nothing more than ordinary skill and routine experimentation.

12. Claims 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shaw et al. as applied to claims 11, 20, 21, and 29 above, and further in view of Jones et al. (WO 00/20157).

Shaw et al. as applied above teach all of the limitations in claims 22 and 24 except for a specific teaching as to the type of energy-absorbing ingredient in the polymeric adhesive. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use as the energy absorbing ingredient in the radiant energy activatable polymeric adhesive taught by Shaw et al. dissolvable organic dyes such as cyanine dyes as it was well known in the

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art to use dissolvable organic dyes as radiant energy absorber ingredients wherein the radiant energy absorbed has a wavelength greater than 780 nm as shown for example by Jones et al.

Jones et al. disclose a method for bonding together two substrates using a polymeric insert (i.e. melt plastic/adhesive) wherein the insert has organic dyes such as cyanine dissolved therein. Jones et al. teach the method comprises applying the insert to a substrate, contacting the insert with a second substrate, activating the insert using radiant energy (e.g. infrared) to melt the insert and contacting areas of each substrate, and then allowing the activated insert and contacting areas of each substrate to solidify thereby bonding the substrates together. Jones et al. teach the organic dyes absorb radiant energy having a wavelength greater than 780 nm, and Jones et al. teach activating the insert either before or after contacting with the two substrates (Figure 2 and Page 2, lines 27-33 and Page 3, lines 29-31 and Page 8, lines 20-29 and Page 9, lines 8-14 and Page 11, lines 14-18).

13. Claims 11-14, 20-22, 24, 29-32, 34, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (Specification pages 1 and 2) in view of Jones et al.

The admitted prior art is directed to conventional packaging processes used in the manufacture of cardboard, i.e. paperboard or chipboard, containers such as boxes and bags. The admitted prior art teaches using a hot melt adhesive to seal the containers (Specification page 1, paragraph 3). The admitted prior art further teaches the adhesives may be pre-applied and then reactivated prior to sealing (Specification page 1, paragraph 4 and page 2, paragraph 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the hot melt adhesives taught by the admitted prior art to include dissolved radiant energy absorbing organic dyes such as cyanine dyes to increase the speed at which the adhesives



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are reactivated as this technique, i.e. activating a melt polymer using dissolved radiant energy absorbing organic dyes, was well known in the art as shown for example by Jones et al. It is noted the admitted prior art as modified by Jones et al. would also provide a method of reactivating the adhesives wherein only the adhesive is heated not the substrate, its contents, or the surrounding area and equipment.

Jones et al. disclose a method for bonding together two substrates using a polymeric insert (i.e. melt plastic/adhesive) wherein the insert has organic dyes such as cyanine dissolved therein. Jones et al. teach the method comprises applying the insert to a substrate, contacting the insert with a second substrate, activating the insert using radiant energy (e.g. infrared) to melt the insert and contacting areas of each substrate, and then allowing the activated insert and contacting areas of each substrate to solidify thereby bonding the substrates together. Jones et al. teach the organic dyes absorb radiant energy having a wavelength greater than 780 nm, and Jones et al. teach activating the insert either before or after contacting with the two substrates (Figure 2 and Page 2, lines 27-33 and Page 3, lines 29-31 and Page 8, lines 20-29 and Page 9, lines 8-14 and Page 11, lines 14-18).

Regarding claims 13 and 14, the admitted prior art as modified by Jones et al. do not expressly recite the amount of time for maintaining the contacting pressure and radiant energy during sealing. It would have been obvious to one of ordinary skill in the art at the time the invention was made to experimentally determine/optimize the amount of time for maintaining the contacting pressure and radiant energy as a function of the type of polymeric adhesive, the intensity of the radiant energy, the bond strength, etc. as doing so would have required nothing more than ordinary skill and routine experimentation.

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*Response to Arguments*

14. Applicant's arguments with respect to claims 11-14, 20-22, 24, 29-32, 34, and 39 have been considered but are moot in view of the new ground(s) of rejection. The new rejections are made in view of applicants amendment to require "radiant energy having a wavelength of from about 400 nm to about 100,000 nm" to activate the adhesive.

*Conclusion*

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John L. Goff** whose telephone number is **703-305-7481** (after December 2003 the telephone number will be 571-272-1216). The examiner can normally be reached on M-Th (8 - 5) and alternate Fridays.

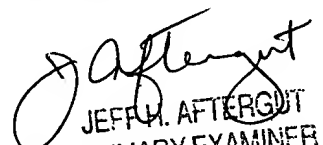
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 703-308-3853. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



John L. Goff  
December 3, 2003



JEFF H. AFTERGUT  
PRIMARY EXAMINER  
GROUP 1300